Div. 9

~~235~~ 416/247

235,400

235,400 COMPLETE SPECIFICATION

1 SHEET

BERKELEY & YOUNG, LTD.

[This Drawing is a reproduction of the Original on a reduced scale]

Fig. 1.

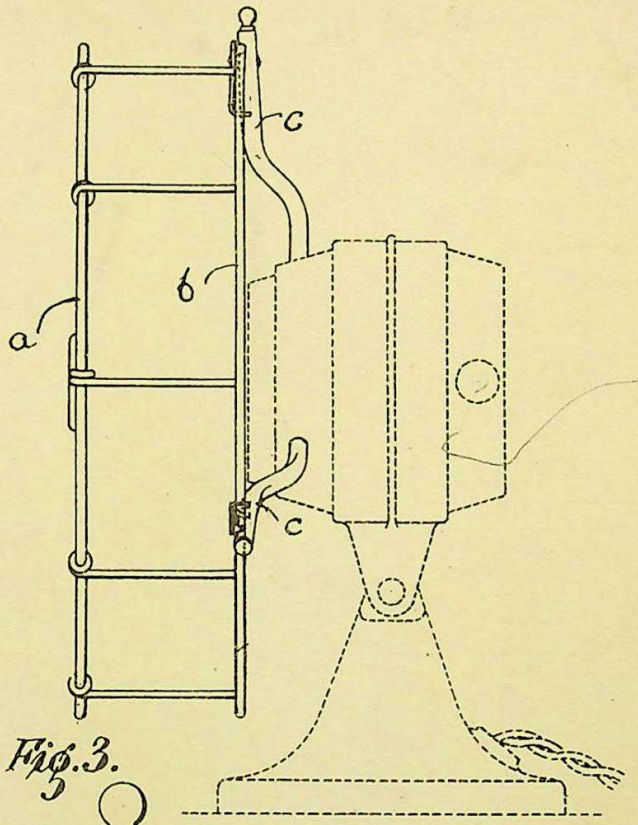

Fig. 2.

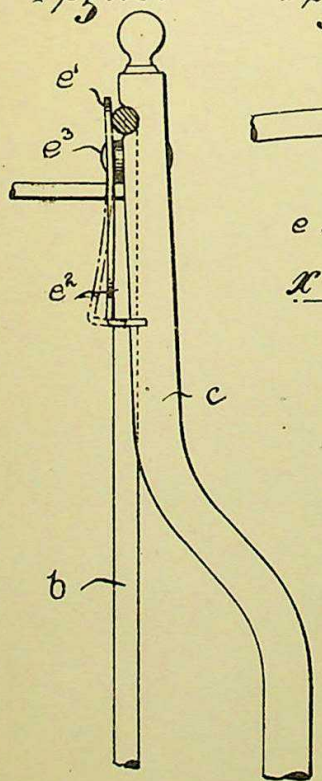

Fig. 3.

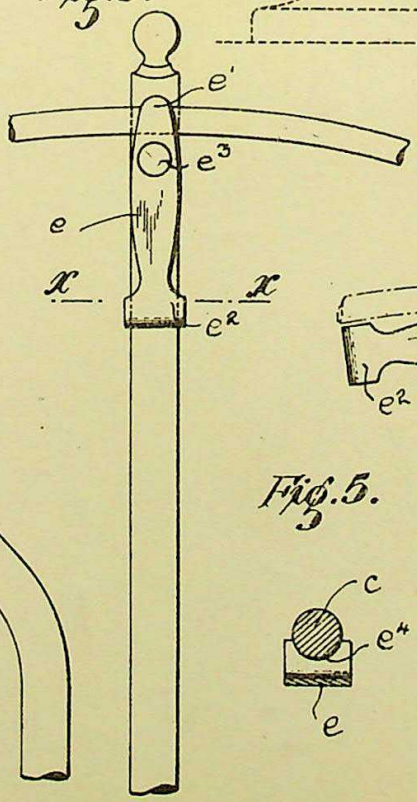

Fig. 4.

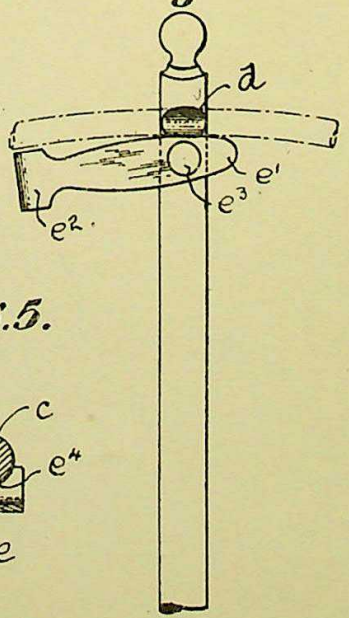

Fig. 5.

Malby & Sons, Photo-Litho

PATENT SPECIFICATION

Application Date: June 28, 1924. No. 15,575/24. 235,400

Complete Left: March 28, 1925.

Complete Accepted: June 18, 1925.

PROVISIONAL SPECIFICATION.

Improvements in or relating to Guards for use in connection with Rotary Fans.

We, BERKELEY & YOUNG LIMITED, a company duly incorporated under the laws of Great Britain, and NEVILLE WALLACE GILBERT, a subject of the King of Great Britain, both of Perseverance Works, King's Road, Hay Mills, Birmingham, do hereby declare the nature of this invention to be as follows:—

Electrically-driven fans are usually provided with a wire or similar guard or frame which surrounds the rotary propellor and is mounted on a series of arms or supports extending radially from the casing of the electro-motor or similar part of the machine, and for convenience in transport or storage as well as for obtaining access to the propellor, these guards are generally so fixed to their supports that the guard can be detached when necessary.

The present invention has reference to the mounting of such detachable guards upon their radial supporting arms and has for its object to provide for the detachable connection of the guard by simple but effective fastenings which are permanently secured to the supporting arms to safeguard them against loss and which enables the guard to be positively locked in its position of use but to be easily detached or disconnected when required.

According to the said invention, as applied to the fastening of a guard comprising an inner ring of wire, we propose to form the front sides of the radial guard-supporting arms of the fan with grooves or recesses so disposed as to constitute a system of seatings in which the guard-ring lies when positioned on its supports, and on the front of each support, inwards of the guard seating therein, we pivotally mount a catch or fastening device comprising a hook-like head for engaging over the front of the part of the guard-ring when the latter is positioned in its seating and a lever portion or tail piece of suitable length which serves both as a means for turning the catch-head into and out of engagement, and as a spring locking device which, in the fastened position, positively engages the supporting arm and so prevents inadvertent disconnection of the guard.

To secure the fastening against detachment from the supporting arm, its pivot is preferably rivetted or otherwise permanently fixed to the said arm, whilst for establishing the desired positive connection between the spring tail of the catch and the said arm in the fastened position, the end of the tail remote from the pivot may be bent inwards at a right angle and formed, on the inner edge, with a half-round or other recess corresponding to the section of the supporting arm, so that on the catch being sprung into the position in which the hooked head fully engages the guard-ring, the recessed end of the tail simultaneously engages the support arm and the complete device is locked in its operative position by the spring re-action of the said tail.

Whilst it is preferred to obtain the locking effect by providing a recess in the spring tail piece corresponding in shape to the section of the support arm, any equivalent retaining means may be used instead thereof, such as a stud or projection on the inner side of the tail and a corresponding recess in the support arms to receive the tail stud in the fastened position of the catch. Or a stud may be formed on the arm and a notch, recess or perforation made in the tail to connect with the said stud.

Dated this 27th day of June, 1924.

ARTHUR SADLER & GOOLD,
Chartered Patent Agents,
44, Waterloo Street, Birmingham,
Agents for the Applicants.

[*Price* 1/-]

COMPLETE SPECIFICATION.

Improvements in or relating to Guards for use in connection with Rotary Fans.

We, BERKELEY & YOUNG LIMITED, a company duly incorporated under the laws of Great Britain, and NEVILLE WALLACE GILBERT, a subject of the King of Great Britain, both of Perseverance Works, King's Road, Hay Mills, Birmingham, do hereby declare the nature of this invention and in what manner the same is to be performed, to be particularly described and ascertained in and by the following statement:—

Electrically driven fans are usually provided with a wire or similar guard which encloses the rotary propeller and which is mounted on a series of three or more arms or supports extending radially from the casing of the electro-motor or similar part of the machine. For convenience in transport or storage, as well as for obtaining access to the propeller in case of repairs or the like being necessary, these guards are generally so fixed to their supports so that they may be readily detached when required.

The present invention relates to the mounting of such detachable guards upon their radial supporting arms and has for its object to provide for the readily detachable connection of the guard by simple but effective fastenings which are pivotally and preferably permanently secured to the supporting arms to safeguard them against loss and which enable the guard to be positively locked in its position of use but to be capable of being easily detached or disconnected from the supporting arms attached to the electro-motor when required.

In the accompanying drawings,

Figure 1 is a side elevation showing the guard in its normal position attached to radial arms springing from the fan-motor casing.

Figure 2 is an enlarged side elevation of one of the radial arms showing the guard attached thereto.

Figure 3 is a front view of Figure 2.

Figure 4 is a similar view to Figure 3 but showing the fastening device in the position in which it is placed to permit of removal or replacement of the guard.

Figure 5 is a section along the line *x*, *x*, Figure 3.

According to the application of the said invention as illustrated in the said drawing, a guard *a*, comprising an inner ring of wire *b* is fastened to a series of radial guard-supporting arms *c* by forming the front of said arms with grooves or recesses *d* of such dimensions as to constitute a system of seatings for the guard ring *b* and ensure the said guard being firmly fixed when positioned on its supports. On the front of each support *c*, that is on the same side as the guard seating, there is pivotally, but permanently, mounted a catch or fastening device *e* which device comprises a catch head e^1 for engaging over the front part of the guard-ring *b* when the latter is positioned in its seating *d*, and a lever portion or tail piece e^2 of suitable length which, in the fastened position, positively engages the supporting arm and so prevents inadvertent disconnection of the guard.

To secure the fastening *e* against detachment from the supporting arm *c*, its pivot e^3 is preferably rivetted or otherwise permanently fixed to the said arm, whilst for establishing the desired positive connection between the tail piece e^2 of the catch and the said arm, in the fastened position, the end of the tail remote from the pivot may be bent inwards at right-angles and formed, on the inner edge, with a semi-circular or other recess e^4 corresponding to the section of the supporting arm, so that on the catch *e* being sprung into the position in which the head e^1 fully engages the inner wire ring *b* of the guard, the recessed end of the tail piece e^2 simultaneously engages the support arm *c* thus locking the whole device in its operative position by the spring reaction of the said tail-piece.

Whilst it is preferable to obtain the locking effort by providing a recess in the spring tail-piece corresponding in shape to the section of the support arm, any equivalent retaining piece may be used instead thereof, such as a stud or projection on the inner side of the tail e^2 and a corresponding recess on the support arm *c* to receive the tail stud in the fastened position of the catch. Or a stud may be formed on the arm and a notch, recess or perforation made in the tail to connect with the said stud.

Having now particularly described and ascertained the nature of our said inven-

tion and in what manner the same is to be performed, we declare that what we claim is:—

1. Means for mounting detachable guards on rotary fans on their radial supports, comprising a spring catch which is pivotted to the radial supporting arm and is adapted to secure a member of the guard within a groove or seating in the said supporting arm.

2. Means for mounting detachable guards on rotary fans according to Claim 1, in which the catch is adapted to engage the radial guard support when in its guard-fastening position.

3. The improved fastening for fan-guards substantially as herein described or illustrated in the accompanying drawing.

Dated this 27th day of March, 1925.

ARTHUR SADLER & GOOLD,
Chartered Patent Agents,
44, Waterloo Street, Birmingham,
Agents for the Applicants.

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